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AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A method of providing direct access to a voice mail system (VMS) hosting a voice mail box associated with a service subscriber, the method comprising steps of:

formulating a call set-up message for initiating the establishment of a call connection to the VMS without first attempting to complete a call to the service subscriber, the call set-up message having a format reserved for a redirected call set-up message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber; and

issuing the call setup message into a common channel signaling (CCS) network to initiate the establishment of the call connection directly to the voice mail box of the service subscriber.

2. (Original) A method as claimed in claim 1 wherein the CCS network uses signaling system 7 (SS7) protocol, and the step of formulating a call set-up message further comprises steps of:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM);

inserting a directory number (DN) of the VMS into a called party number parameter in the IAM; and

inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM, in conformance with a SS7 standard.

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3. (Original) A method as claimed in claim 2 wherein the step of inserting comprises a step of inserting the service subscriber's DN into the original called number and the redirecting number parameters, in conformance with the SS7 standard.
4. (Original) A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into a redirection information parameter, the reason code being used by the VMS to select a voice mail prompt to play to the calling party.
5. (Original) A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into the redirection information parameter, the reason code being a default value indicating that the reason for redirection is unknown or not available.
6. (Currently Amended) A method of providing direct access to a voice mail box of a service subscriber to a voice mail system (VMS), the method comprising steps of:
receiving at a call control application, a message sent in response to a request for direct access to the voice mail box by a requesting party;
formulating a call setup message for initiating establishment of a call connection between the requesting party and the VMS without first attempting to complete a call to the service subscriber, the call setup message having a format reserved for a redirected call setup message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber; and
sending the call set-up message into the CCS network to initiate the establishment of the call connection.
7. (Original) A method as claimed in claim 6 wherein the CCS network uses signaling system 7 (SS7) protocols, and the step of formulating a call setup message further comprises steps of:

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instantiating a default integrated users digital network-user part (ISUP) initial address message (IAM);
inserting a directory number (DN) of the VMS's into a called party number parameter of the IAM; and
inserting a redirecting number parameter and an original called number parameter in the IAM, in conformance with a SS7 standard.

8. (Original) A method as claimed in claim 7 wherein the step of inserting comprises a step of inserting a DN of the service subscriber into the original called number and redirecting number parameters, in conformance with the SS7 standard.

9. (Original) A method as claimed in claim 8 further comprising a step of inserting a redirecting reason code into a redirection information parameter, the redirecting reason code identifying the IAM as a request to leave a voice message with a direct to voice mail call.

10. (Original) A method as claimed in claim 8 further comprising a step of inserting a default value redirecting reason code into the redirection information parameter.

11. (Original) A method as claimed in claim 8 wherein the step of receiving the message comprises steps of:

receiving a connection request message; and
inspecting the connection request message to remove three identifiers; a requesting party identifier, a service subscriber identifier, and a VMS identifier.

12. (Original) A method as claimed in claim 11 wherein the step of receiving a connection request message comprises a step of receiving over an Internet protocol (IP) connection, from a server on the Internet adapted to receive click-to-voice mail notifications from at least one worldwide web page, a connection request message that conforms to a predefined

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format and includes directory numbers for the requesting party, service subscriber and VMS.

13. (Original) A method as claimed in claim 12 further comprising steps of:

initiating an establishment of a call connection between the requesting party's DN and a virtual instance of a call control node (CCN) prior to the step of sending; and
effecting an extension of the call connection from the virtual instance of the CCN to the VMS with the step of sending.

14. (Original) A method as claimed in claim 11 wherein the step of receiving comprises a step receiving a reconnect request message from call termination equipment, the reconnect connect message including a DN of the call termination equipment, a DN of the requesting party, a DN of the service subscriber and a DN of the VMS.

15. (Original) A method as claimed in claim 14 further comprising steps of:

effecting a forward release of a part of the established call connection between a virtual instance of the CCN and the call termination equipment; and

initiating an establishment of an extension of the established call connection from the virtual instance of the CCN to the VMS with the step of sending.

16. - 40. (Previously Cancelled)

41. (New) A method of providing direct access to a voice mail box of a service subscriber to a voice mail system (VMS) in a telephone network, comprising a step of providing a click to voice mail option on one of a web page and an electronic mail message to permit a requesting party to request a call connection to the service subscriber's voice mail box without first attempting to complete a call to the service subscriber.

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42. (New) The method as claimed in claim 41 further comprising a step of formulating a message that is sent to a call control application to request the call connection to the voice mail box when the requesting party selects the click to voice mail option.

43. (New) The method as claimed in claim 42 further comprising a step of receiving at the call control application, the message sent when the requesting party selected the click to voice mail option.

44. (New) The method as claimed in claim 43 further comprising a step of formulating a call setup message for initiating establishment of a call connection between the requesting party and the VMS, the call setup message having a format reserved for a redirected call setup message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber.

45. (New) The method as claimed in claim 44 further comprising a step of sending the call setup message into the CCS network to initiate the establishment of the call connection between a calling number supplied by the requesting party and the voice mail box of the service subscriber.

46. (New) The method as claimed in claim 45 wherein the step of formulating a message that is sent to a call control application further comprises a step of:

formulating a data message sent to the call control application, the data message including a calling party number input by the requesting party, a called party number corresponding to a directory number (DN) of the service subscriber, and a directory number (DN) used for direct access to the VMS of the service subscriber.

47. (New) The method as claimed in claim 46 wherein the step of formulating a call setup message comprises:

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formulating a first call setup message for establishing a call connection with the calling party number input by the requesting party; and
formulating a second call setup message for establishing a call connection with the DN of the VMS.

48. (New) The method as claimed in claim 47 further comprising steps of:

sending the first call setup message into a common channel signaling network of the switched telephone network to connect the calling number supplied by the requesting party to a first end of an enhanced ISUP trunk associated with the call control node; and

sending the second call setup message into a common channel signaling network of the switched telephone network to connect the VMS to a second end of the enhanced ISUP trunk.

49. (New) The method as claimed in claim 47 wherein formulating the second call setup message comprises steps of:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM) at the call control application;

inserting DN of the VMS into a called party number parameter in the IAM; and

inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM.

50. (New) The method as claimed in claim 49 wherein the step of inserting the redirecting number parameter comprises a step of inserting the DN associated with the calling party in the redirecting number parameter.

51. (New) The method as claimed in claim 49 wherein the step of inserting the original called number parameter comprises a step of inserting the DN associated with the service subscriber into the redirecting number parameter.

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52. (New) A method of providing direct access to a voice mail box of a service subscriber to a voice mail system (VMS) in a telephone network, comprising a step of providing a directory service that permits a requesting party to request a direct call connection to the service subscriber's voice mail box without first attempting to complete a call to the service subscriber.

53. (New) The method as claimed in claim 52 further comprising a step of formulating a message that is sent to a call control application to request the call connection to the voice mail box when the requesting party requests a direct connection to the voice mail box of the service subscriber.

54. (New) The method as claimed in claim 53 further comprising a step of receiving at the call control application, the message sent when the requesting party selected the click to voice mail option.

55. (New) The method as claimed in claim 54 further comprising a step of formulating a call setup message for initiating establishment of a call connection between the requesting party and the VMS, the call setup message having a format reserved for a redirected call setup message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber.

56. (New) The method as claimed in claim 55 further comprising a step of sending the call setup message into the CCS network to initiate the establishment of the call connection between a calling number supplied by the requesting party and the voice mail box of the service subscriber.

57. (New) The method as claimed in claim 56 wherein the step of formulating a message that is sent to the call control application further comprises a step of:

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formulating a data message sent to the call control application, the data message including a calling party number input by the requesting party, a called party number corresponding to a directory number (DN) of the service subscriber, and a directory number (DN) used for direct access to the VMS of the service subscriber.

58. (New) The method as claimed in claim 56 wherein the step of formulating the call setup message comprises:

formulating a first call setup message for establishing a call connection with the calling party number input by the requesting party; and

formulating a second call setup message for establishing a call connection with the DN of the VMS.

59. (New) The method as claimed in claim 58 further comprising steps of:

sending the first call setup message into a common channel signaling network of the switched telephone network to connect the calling number supplied by the requesting party to a first end of an enhanced ISUP trunk associated with the call control node; and

sending the second call setup message into a common channel signaling network of the switched telephone network to connect the VMS to a second end of the enhanced ISUP trunk.

60. (New) The method as claimed in claim 59 wherein formulating the second call setup message comprises steps of:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM) at the call control application;

inserting DN of the VMS into a called party number parameter in the IAM; and

inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM.

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61. (New) The method as claimed in claim 60 wherein the step of inserting the redirecting number parameter comprises a step of inserting the DN associated with the calling party in the redirecting number parameter.

62. (New) The method as claimed in claim 60 wherein the step of inserting the original called number parameter comprises a step of inserting the DN associated with the service subscriber into the redirecting number parameter.

63. (New) The method as claimed in claim 56 wherein the step of providing a directory service comprises a step of providing a dial-up directory service accessed through a dial-up connection.

64. (New) The method as claimed in claim 56 wherein the step of providing a directory service comprises a step of providing an online service accessed through the Internet.

65. (New) The method as claimed in claim 63 wherein the step of providing the directory service further comprises a step of permitting a requesting party to communicate an identifier used to locate a directory record associated with the VMS service subscriber, and providing the requesting party with an option to be connected directly to the VMS service subscriber's voice mail box after the record is located.